

REMARKS

Claims 1-16 are currently pending in the application. Claims 1, 7, 8, 11, 12, 14, and 16 have been amended.

On page 2 of the Office Action, the Examiner objected to claims 1, 7, 8, 11, 12, and 16. Applicants have amended the affected claims. Therefore, withdrawal of the objection is respectfully requested.

Claim 14 was rejected as allegedly failing to comply with the enablement requirement. Applicants have amended claim 14 to depend from claim 12. Therefore, withdrawal of the rejection is respectfully requested.

On page 3 of the Office Action, the Examiner rejected claim 1 under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants respectfully submit that claim 1 is not indefinite. In *In re Kirsch*, in a claim directed to a chemical reaction process, a limitation required that the amount of one ingredient in the reaction mixture should "be maintained at less than 7 mole percent" based on the amount of another ingredient. The examiner argued that the claim was indefinite because the limitation set only a maximum amount. The court disagreed. See *In re Kirsch*, 498 F.2d 1389. Therefore, the mere lack of recitation of an end of a boundary, that is, a maximum amount or a minimum amount, does not necessarily render a claim indefinite.

Moreover, Applicants respectfully submit that one of ordinary skill in the relevant art would readily appreciate that the claim is definite, as the repetition frequency can be any positive integer, greater than one, times a bit rate. In light of the foregoing, Applicants respectfully request withdrawal of the rejection.

On page 3 of the Office Action, claims 1-3, 5-9, and 11-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of U.S. Patent No. 7092643 (Kajiya).

Applicants respectfully submit that the modification (proposed by the Examiner on page 5 of the Office Action) of the conventional system described in the background section of Applicants' application would render the conventional system unsatisfactory for its intended purpose. Therefore, there is no suggestion or motivation to make the proposed modification regarding replacement of the first modulator and frequency doubler of the conventional system.

Hence, a *prima facie* case of obviousness has not been established. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

In particular, according to the Examiner's proposed modification, the frequency doubler of the conventional system described in the background section of Applicants' specification could be replaced with an MZ optical modulator.

As described beginning with the last paragraph on page 4 of Applicants' specification, the conventional system of FIG. 15 utilizes a two-stage configuration. In the optical gate 101 on the previous stage, the 20 GHz electric clock obtained by multiplying the 10 GHz fundamental frequency by 2 is used as a drive signal to reduce optical gating time. To realize the 20 GHz electric clock, the frequency doubler 105 and the electric amplifiers 106 are *required*. Therefore, if the frequency doubler 105 were replaced in the conventional system, the 20 GHz electric clock would not be realized. As a result, there would not be a drive signal to reduce optical gating time in the previous stage. Therefore, the conventional system would not operate as it were intended, due to the resulting problem with the previous stage.

As a *prima facie* case of obviousness cannot be established, Applicants respectfully submit that independent claims 1, 12, and 15 are patentable over the references. As dependent claims 2-11 and 13-14 depend from respective independent claims 1 and 12, the dependent claims are patentable over the references for at least the reasons presented for the independent claims.

As claim 10 depends from claim 1, Applicants respectfully submit that claim 10, via claim 1, is patentable over the background section of Applicants' specification in view of Kajiya and further in view of Kartalopoulos, as Kartalopoulos does not cure the deficiencies of the other references.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Serial No. 10/642,602

Date: 6-14-07

By: 

Reginald D. Lucas

Registration No. 46,883

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501